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ABSTRACT

More attention should be paid to the building of career guidance and career curriculum programs with exit points that enable the student to seek employment at any time in an entry level position and/or to continue his education. Some of the best "career ladder" programs are the federally sponsored New Career programs. A number of the California junior colleges involved in this program are listed and the details of their programs discussed. The following guidelines are given for construction of a "career ladder" curriculum: (1) identify specific titles of jobs that are available; (2) apply a job analysis to the occupation; (3) organize the curriculum to reflect specific behavioral objectives; (4) develop evaluation criteria; and (5) develop the curriculum. Examples of programs with related employment possibilities are listed for: human services, municipal services, accounting, agronomy, aerospace drafting technology, agri-business, air transportation-commercial pilot, air transportation general, architectural technology, civil technology, environmental science technology, marine laboratory technician option, journalism, and industrial drafting. (CA)

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A "CAREER LADDER" APPROACH TO JUNIOR COLLEGE CURRICULUM

FOR

DR. B. LAMAR JOHNSON

IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS OF EDUCATION 261-D

BY

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CLEARINGHOUSE FOR
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INTRODUCTION

IT SEEMS QUITE CLEAR THAT IN THE THINKING OF MOST PEOPLE, "COLLEGE" HAS BECOME THE GATEWAY TO PROFESSIONAL AND MANAGERIAL STATUS. THIS SITUATION IS EXERTING A POWERFUL INFLUENCE ON THE ORIENTATION OF MILLIONS OF YOUNG PEOPLE APPROACHING COLLEGE AGE. THEIR PARENTS, TEACHERS, AND COUNSELORS, PLUS THE MASS MEDIA, ARE CONSTANTLY IMPRESSING UPON THEM THAT A COLLEGE EDUCATION IS INDISPENSIBLE FOR ACHIEVING A RESPECTABLE AND SATISFYING STATUS IN AMERICAN LIFE. SO EACH YEAR, HUNDREDS OF THOUSANDS OF STUDENTS ENTER COLLEGE UNDECIDED AS TO WHY THEY ARE THERE, BUT PUSHED ON BECAUSE OF THEIR CULTURE THAT MANDATES THAT THEY MUST GO. MANY BECOME DISENCHANTED, DO NOT DO WELL, AND LEAVE WITHOUT GAINING ANY SKILLS WHICH COULD HELP THEM TO EARN A LIVING.

LIBERAL ARTS COLLEGES AND UNIVERSITIES SEEM TO PAY RELATIVELY LITTLE ATTENTION TO THE OCCUPATIONAL OUTCOMES OF COLLEGE TRAINING. IN FACT, OFTEN WE HAVE FOUND CRITICAL ATTACKS ON THE VOCATIONAL EMPHASIS OF MANY PROGRAMS, A COMMENT WHICH IS ILLUSTRATED BY ROBERT M. HUTCHINS, WHO FELT, "THE OBJECT OF THE EDUCATIONAL SYSTEM, TAKEN AS A WHOLE, IS NOT TO PRODUCE HANDS FOR INDUSTRY OR TO TEACH THE YOUNG HOW TO MAKE A LIVING."¹

THE LIBERAL ARTS PROFESSOR, (IN A UNIVERSITY OR JUNIOR COLLEGE) IS NOT LIKELY TO BE ESPECIALLY CONCERNED WITH THE CAREER GOALS OF HIS UNDERGRADUATE STUDENTS UNLESS THEY SHOW SOME INCLINATION TO FOLLOW HIS PATH. RARELY DO LIBERAL ARTS COLLEGE FACULTY MEMBERS SEE ANY NEED TO DEVELOP FOR THEIR STUDENTS THE IMPORTANCE OF WHAT THEY TEACH FOR THE PERSONAL OR CAREER ASPIRATIONS OF THE STUDENTS.

COMMUNITY COLLEGES THEN, ARE ASSUMING THE MAJOR RESPONSIBILITY FOR TECHNICAL-VOCATIONAL EDUCATION,² AND ARE INCLUDING IN A SINGLE INSTITUTION, PREPARATION FOR EMPLOYMENT AND EDUCATION FOR TRANSFER.³ AS MORE AND MORE

STUDENTS BEGIN THEIR EDUCATION IN A JUNIOR COLLEGE, (TWENTY-FIVE PERCENT NATIONALLY AND AS HIGH AS EIGHTY PERCENT IN CALIFORNIA)⁴ IT WOULD APPEAR THAT, AT LEAST IN CALIFORNIA, MUCH MORE ATTENTION MUST BE PAID TO THE BUILDING OF CAREER GUIDANCE AND CAREER CURRICULUM PROGRAMS IN THE JUNIOR COLLEGES THEMSELVES.

TRADITIONAL "TWO YEAR" PROGRAMS IN VOCATIONAL EDUCATION ARE BECOMING SOMEWHAT BLURRED, IN THAT SOME STUDENTS TRANSFER TO FOUR YEAR COLLEGES AND OTHERS LEAVE SCHOOL IN LESS THAN THE TWO YEARS TO SEEK WORK IN THEIR FIELD. PERHAPS WE MUST START THINKING OF THESE PROGRAMS NOT AS "TRANSFER" OR "TERMINAL," BUT RATHER AS CAREER LADDERS TO VOCATIONS WITH EXIT POINTS AT ANY TIME TO EMPLOYMENT OR TO FURTHER EDUCATION.

THIS PAPER WILL DEFINE A CAREER LADDER APPROACH TO CURRICULUM, AND IT WILL SHOW A RATIONALE FOR DEVELOPING SUCH AN APPROACH. IT WILL SHOW WHERE EFFORTS HAVE BEEN MADE TO INSTITUTE SUCH PLANS, AND SOME GUIDELINES ON HOW TO DEVELOP THEM. FINALLY, IT WILL, BY IMPLICATION, ENCOURAGE OTHERS TO TRY TO FIND NEW AREAS WHERE PROGRAMS CAN BE RE-DESIGNED OR RE-STRUCTURED TO GIVE STUDENTS SPECIFIC SKILLS IN ORDER TO SEEK EMPLOYMENT.

SURVEY OF LITERATURE

A RECENT PUBLICATION, ORIENTATION TO THE TWO YEAR COLLEGE,⁵ DEFINES A CAREER LADDER AS FOLLOWS:

"THE COMPLETION OF THE OCCUPATIONAL PROGRAM PROVIDES AN IMMEDIATE, VALUABLE SKILL MUCH NEEDED BY SOCIETY, BUT SIMULTANEOUSLY ADVANCED WORK CAN BE BUILT UPON THE TECHNOLOGICAL SKILL GAINED FOR THOSE WHO ASPIRE TO HIGHER DEGREES. WHAT BETTER EDUCATIONAL APPROACH CAN THERE BE THAN ONE THAT ENSURES THAT AT EVERY POINT UP THE EDUCATIONAL CAREER LADDER, AN INDIVIDUAL WILL ACQUIRE SOCIALLY VALUABLE SKILLS AND THEN ENHANCE HIS SKILLS AT EACH SUCCEEDING RUNG ON THE LADDER. SUCH AN APPROACH LITERALLY MEANS THAT AFTER THE FIRST PERIOD OF TIME IN COLLEGE AND EVERY PERIOD THEREAFTER, THE STUDENT WILL HAVE EVER-IMPROVING TECHNOLOGICAL SKILLS TO OFFER SOCIETY. SOCIETY, IN TURN, RESPONDS WITH EVER-INCREASING ECONOMIC REWARDS IN RECOGNITION OF THE LEVEL OF EXPERTISE THE STUDENT HAS TO OFFER."

THE BOARDS OF TRUSTEES OF TWO DISTRICTS IN ORANGE COUNTY SEVERAL YEARS AGO FELT THAT, "OCCUPATIONAL PREPARATION IN THE JUNIOR COLLEGE SHOULD INCREASINGLY BE WELDED INTO AN ADAPTED LOWER DIVISION PROGRAM, SUITABLE FOR EMPLOYMENT UPON COMPLETION OF THE A.A. DEGREE OR LESS, AND ALSO SUITABLE, WITH A MINIMUM LOSS OF CREDIT, FOR CONTINUING THROUGH A BACCALAUREATE DEGREE."⁶ THE SAME BOARDS FELT TOO, THAT FOR JOB PROGRESS AND RE-TRAINING, "THE STUDENT POPULATION MUST INCREASINGLY BE REPRESENTED BY MATURE MEN AND WOMEN WITH CONSIDERABLE WORK HISTORY WHO MUST BE 'RE-CYCLED' THROUGH THE EDUCATIONAL PROCESS TO PRESERVE THEIR OPPORTUNITIES FOR MAKING OR ENHANCING THEIR CONTRIBUTIONS TO SOCIETY."⁷

SOME OF THE BEST CAREER LADDER PROGRAMS CAN BE FOUND IN THE DEVELOPMENT OF OPPORTUNITIES UNDER FEDERALLY-SPONSORED NEW CAREER PROGRAMS.⁸ THESE PROGRAMS ARE DESIGNED TO PROVIDE EDUCATION FOR THE DISADVANTAGED IN ORDER THAT THEY CAN GAIN ENTRY LEVEL JOB CLASSIFICATIONS IN PUBLIC SERVICE FOR SOME BRANCH OF GOVERNMENT. WHILE THE NEW CAREERS PROGRAM PROVIDES MANY SPECIAL SERVICES, (ACADEMIC TUTORING, JOB ASSISTANCE, SPECIALIZED CLASSES, COUNSELING,

ETC.), IT IS THE CAREER LADDER APPROACH THAT IS OF MOST INTEREST HERE. A
NUMBER OF COMMUNITY COLLEGES HAVE BECOME INVOLVED IN THE NEW CAREERS APPROACH
IN VARYING DEGREES.⁹ AMONG THEM ARE:

PASADENA CITY COLLEGE, PASADENA
SAN DIEGO CITY COLLEGES, SAN DIEGO
COLLEGE OF THE DESERT, PALM DESERT
MT SAN JACINTO, GILMAN HOT SPRINGS
PALO VERDE, BLYTHE
RIVERSIDE CITY COLLEGE, RIVERSIDE
CONTRA COSTA COLLEGE, SAN PABLO

(DETAILS OF THESE PROGRAMS WILL BE DISCUSSED MORE FULLY LATER ON IN
THE PAPER.)

THE SAN MATEO COLLEGES¹⁰ HAVE WHAT THEY CALL THE "INVERTED CURRICULUM"
DESIGNED TO ATTRACT STUDENTS WHO MAY STAY IN COLLEGE ONLY FOR A SHORT TIME.
FOR THE STUDENT WHO DOES NOT RESPOND FAVORABLY TO THE TRADITIONAL COLLEGE
PROGRAM, THE INVERTED CURRICULUM OFFERS IMMEDIATE TECHNICAL AND BUSINESS
TRAINING WITH THE OPPORTUNITY TO TRANSFER LATER ON OR TO TAKE ADVANTAGE OF
OPTIONS ALONG THE WAY THAT PROVIDE EMPLOYMENT OPPORTUNITIES.

DR. NORMAN C. HARRIS OF THE UNIVERSITY OF MICHIGAN SUMMARIZED THE NEED FOR EDUCATION, PARTICULARLY TECHNICAL EDUCATION, IN A CHANGING JOB MARKET: "PROFESSIONAL JOBS ... WILL CONSTITUTE 12% OF THE LABOR FORCE BY 1970. BUT THE REALLY SIGNIFICANT CHANGES HAVE OCCURRED AT THE LEVEL OF SEMI-PROFESSIONAL AND TECHNICAL,... WHERE THESE JOBS TOGETHER WILL ACCOUNT FOR OVER 50% OF THE LABOR FORCE IN 1970."¹¹ WHAT THIS MEANS IS THAT B.A. DEGREES WILL BE NEEDED FOR LESS THAN 20% OF OUR LABOR FORCE WHILE A.A. DEGREES WILL BE NEEDED FOR OVER 50% OF THE JOBS.

IT WOULD SEEM THAT IF WE HAVE IN THE JUNIOR COLLEGES A MAJORITY OF BEGINNING COLLEGE STUDENTS, THE PROGRAMS AVAILABLE FOR THEM AND THE GUIDANCE EFFORTS EXPENDED, SHOULD REFLECT THE OCCUPATIONAL NEEDS AS DISCUSSED ABOVE. BUT IN ACTUALITY, MOST JUNIOR COLLEGE STUDENTS ENROLL IN TRANSFER PROGRAMS WHERE TWO-THIRDS OR MORE DROP OUT OR DO NOT TRANSFER.¹² IN FACT, ALL AMERICAN COLLEGES, JUNIOR AND SENIOR, LOSE OVER ONE-HALF OF THEIR STUDENTS BEFORE GRADUATION, WITH JUNIOR COLLEGES SHOWING A MUCH HIGHER RATE.^{13-A}

MANY STUDENTS WHO ENTER A JUNIOR COLLEGE DO NOT HAVE TENTATIVE OCCUPATIONAL PLANS AND, ACCORDING TO ERIKSON, "IN GENERAL IT IS THE INABILITY TO SETTLE ON AN OCCUPATIONAL IDENTITY WHICH DISTURBS YOUNG PEOPLE."¹³ SMALL WONDER THEN THAT SO MANY STUDENTS DO NOT FIND SATISFYING EXPERIENCES IN COLLEGE AND DROP OUT.

SO IT WOULD SEEM THAT AS INCREASING NUMBERS OF STUDENTS ENTER JUNIOR COLLEGES, NEW DEVELOPMENTAL PROGRAMS MUST BE DEVELOPED TO OFFER MORE HOLDING POWER FOR STUDENTS, AND TO OFFER OCCUPATIONAL PROMISE FOR REALISTIC NEEDS OF THE WORK FORCE. PERHAPS THE IDEA OF A DEVELOPMENTAL CAREER LADDER IS ONE THAT MIGHT HELP.

STUDENTS TYPICALLY PERCEIVE ONLY TWO LEVELS OF SPECIALIZED PREPARATION, EITHER A COLLEGE DEGREE (B.A.) OR NO TRAINING AT ALL.¹⁴ IF A STUDENT CAN

LEARN THAT THERE ARE SEVERAL KINDS AND LEVELS OF SPECIALIZED PREPARATION FOR OCCUPATIONS, HE MAY BE ABLE TO SEE MORE CLEARLY HOW MUCH MOBILITY THERE MAY BE AMONG RELATED JOBS. IF HIS FORMAL EDUCATION IS INTERRUPTED AT ANY LEVEL, HE CAN STILL FIND OCCUPATIONAL POSSIBILITIES THAT ARE RELATED TO HIS SPECIAL INTERESTS AND CAN LEAD TO MORE DESIRABLE GOALS WHEN HE HAS GAINED EXPERIENCE OR ADDED TO HIS TRAINING.

IF A STUDENT WHO BEGINS SCHOOL, LEARNS A FEW BASIC SKILLS AND THEN DROPS OUT, CAN START IN AN ENTRY LEVEL TRAINEE JOB WHICH IS MEANINGFUL AND PRODUCTIVE, HE MAY BE INTERESTED IN QUALIFYING HIMSELF FOR PROGRESSIVELY HIGHER CLASSIFICATIONS. AS HE GAINS INCREASED EXPERIENCE, SATISFACTIONS, AND PAY, HE MAY COMPLETE AN ACADEMIC PROGRAM AT THE COLLEGE AND PERHAPS CONTINUE HIS EDUCATION AT A SENIOR COLLEGE.

VOCATIONAL-TECHNICAL TRAINING MAY BE COMING MORE FASHIONABLE IN CALIFORNIA AS EXEMPLIFIED BY GOVERNOR RONALD REAGAN'S REMARKS IN AN ADDRESS IN FEBRUARY, 1971, WHEN HE SAID, "EVERY HIGH SCHOOL STUDENT SHOULD HAVE A SALABLE SKILL UPON GRADUATION."¹⁵ WITH THE IMPLEMENTATION OF THE VEYSEY ACT¹⁶ (WHICH ALLOWS HIGH SCHOOL STUDENTS TO ATTEND JUNIOR COLLEGES FOR A PORTION OF THE DAY WITH BOTH INSTITUTIONS RECEIVING ATTENDANCE COUNTING FOR APPORTIONMENT PURPOSES), BOTH HIGH SCHOOL AND JUNIOR COLLEGE STUDENTS CAN GAIN SALABLE SKILLS IN A SHORT AMOUNT OF TIME USING A CAREER LADDER CURRICULUM.

DEVELOPING A CAREER LADDER APPROACH MEANS RE-DESIGNING OR RE-DEFINING MOST OF THE TRADITIONAL TWO YEAR PROGRAMS CURRENTLY IN OPERATION, AND IT MAY NOT BE OPERABLE IN SOME INSTANCES. HOWEVER, IT IS POSSIBLE AS SHOWN IN THE EXHIBITS FROM THE ORANGE COAST COLLEGE CATALOG (SEE EXHIBIT B). WHAT IT REQUIRES IS FIRST OF ALL TO IDENTIFY THE SPECIFIC JOB TITLES WHICH ARE AVAILABLE AS A RESULT OF BEGINNING UNITS OF CLASS WORK AND THEN WHAT JOB TITLES ARE AVAILABLE AFTER SUCCESSIVE SEMESTERS OF SCHOOL AND/OR JOB EXPERIENCE.

NEXT, ONE MUST APPLY SOME SORT OF JOB ANALYSIS TO THE OCCUPATION, SUCH AS THE FUNCTIONAL JOB ANALYSIS PROCEDURE AS DEVELOPED BY DR. SIDNEY A FINE OF THE W.E. UPJOHN INSTITUTE¹⁷ IN DETERMINING:

WHAT GETS DONE

WHAT WORKERS DO

SOME PERFORMANCE CRITERIA

THEN ONE MUST ORGANIZE THE CURRICULUM TO REFLECT THE SPECIFIC BEHAVIORAL OBJECTIVES TO MEET THE TASKS NEEDED IN THE JOB ANALYSIS AND DEVELOP THE PROGRAM TO TEACH THOSE SKILLS.

AN OUTSTANDING JOB OF IDENTIFYING JOB TITLES FOR ENTRY LEVEL POSITIONS HAS BEEN DONE BY CONTRA COSTA COLLEGE (SEE EXHIBIT A) IN THEIR NEW CAREERS PROGRAM. THEY HAVE COOPERATED WITH VARIOUS GOVERNMENTAL AGENCIES IN EMPLOYING STUDENTS AS:

VOCATIONAL COACHES - HUMAN RESOURCE DEVELOPMENT

DEPUTY SHERIFF AIDES - CONTRA COSTA COUNTY

SOCIAL SERVICE AIDES - CONTRA COSTA COUNTY

MENTAL HEALTH AIDES - CONTRA COSTA COUNTY

PROBATION AIDES - CONTRA COSTA COUNTY

TEACHER AIDES - RICHMOND SCHOOL DISTRICT

COMMUNITY RELATIONS AIDES - COMMUNITY AGENCIES

LABORATORY MECHANIC-TECHNICIAN - CONTRA COSTA COLLEGE

ASSISTANT STUDENT BUSINESS MANAGER - CONTRA COSTA COLLEGE

LIBRARY TECHNICIAN - CONTRA COSTA COLLEGE

EACH OF THESE PROGRAMS WILL ALLOW A STUDENT WITH MINIMUM ACADEMIC SKILLS TO BE EMPLOYABLE AT A TRAINED LEVEL WHILE HE CONTINUES HIS EDUCATION AND BE ELIGIBLE TO UPGRADE HIS POSITION WHEN HE ACQUIRES ADDITIONAL SKILLS.

THE RIVERSIDE COUNTY JUNIOR COLLEGES IN COOPERATION WITH THE UNIVERSITY OF CALIFORNIA - RIVERSIDE AND CALIFORNIA STATE - SAN BERNARDINO, HAVE DEVELOPED THROUGH OPERATION-HEAD START, A PROGRAM IN TEACHER AIDE TRAINING THAT WILL ALLOW A STUDENT TO BECOME MORE QUALIFIED TO ASSUME A LEADERSHIP ROLE IN HEAD START OR TO WORK IN CHILD CARE CENTERS AND NURSERY SCHOOLS, OR AS SOCIAL CASE AIDES AND HEALTH AIDES.

ADDITIONAL DEVELOPMENT OF CAREER LADDERS CAN BE FOUND IN SOME PRELIMINARY WORK WITH THE STATE GOVERNMENT IN SACRAMENTO.¹⁸ A NUMBER OF LADDERS HAVE BEEN DEVELOPED IN THE FOLLOWING AREAS:

BUILDING INSPECTOR
CIVIL ENGINEERS
LIBRARY TECHNICIANS
ACCOUNTING TECHNICIANS
RECREATION
COMMUNITY PLANNER
SUB-PROFESSIONAL POLICE

SOME OF THE ALLIED HEALTH FIELDS, AWARE OF THE DEMAND FOR TRAINED WORKERS, ARE DEVELOPING THESE PROGRAMS ALSO. WHILE MANY HEALTH FIELDS REQUIRE REGISTRATION AT THE COMPLETION OF A PROGRAM, (RADIOLOGY, INHALATION THERAPY, NURSING, ETC.) SOME, SUCH AS NURSING, RECOGNIZE A LADDER CONCEPT AND ARE BEGINNING TO ACCEPT PREVIOUS TRAINING. AN EXAMPLE WOULD BE AN AGREEMENT BETWEEN GOLDEN WEST COLLEGE AND THE UNIVERSITY OF CALIFORNIA - IRVINE TO DEVELOP A "LADDER-LATTICE" CONCEPT OF TRANSFERABILITY IN NURSING.¹⁹

ANOTHER PROGRAM IN ALLIED HEALTH WHICH SHOWS THE LADDER IDEA IS IN ELECTRO-DIAGNOSTIC TECHNICIAN TRAINING,²⁰ WHERE AFTER ONE YEAR SOME TASKS CAN BE PERFORMED (EKG, EEG) AND AFTER A SECOND YEAR, ADDITIONAL TASKS

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(CARDIOGRAPH, ETC.) ARE ADDED. OTHER PROGRAMS, IN AS DIVERSE FIELDS AS JET MECHANICS AND MEDICAL ASSISTING, ARE DESIGNED TO PROVIDE EMPLOYMENT AFTER ONE YEAR, AND AFTER COMPLETING A SECOND YEAR, ALLOW THE STUDENT TO ADD RESPONSIBILITIES ON HIS JOB.²¹

SUMMARY

THIS PAPER HAS PRESENTED A DIFFERENT VIEW OF CURRICULUM CONSTRUCTION IN JUNIOR COLLEGES. THIS VIEW HAS BEEN TO DESIGN A CURRICULUM TO PROVIDE A STUDENT WITH SKILLS WHICH WOULD ENABLE HIM TO SEEK EMPLOYMENT AT ANY TIME IN AN ENTRY LEVEL POSITION IN HIS INTEREST AREA. SHOULD HE RE-ENTER SCHOOL AGAIN, WE CAN GAIN NEW SKILLS TO ALLOW HIM TO QUALIFY FOR A HIGHER POSITION. EVENTUALLY, SHOULD HE DECIDE TO, HE CAN ENTER A FOUR YEAR INSTITUTION TO MAJOR IN HIS FIELD OF COMPETENCY AND GAIN A HIGHER DEGREE.

A NUMBER OF PROGRAMS WERE DISCUSSED WHICH UTILIZED A CAREER LADDER APPROACH TO CURRICULUM AND SOME GUIDELINES TO THE CONSTRUCTION OF CURRICULUM WERE PRESENTED:

1. JOB TITLE IDENTIFICATION
2. JOB ANALYSIS (SKILLS NEEDED)
3. BEHAVIORAL OBJECTIVES TO GAIN THOSE SKILLS
4. EVALUATION CRITERIA
5. CURRICULUM DEVELOPMENT

PERHAPS AS SCHOOLS RE-ORGANIZE THEIR CURRICULUM OFFERINGS, SUCH AN APPROACH AS PRESENTED HERE MIGHT BE CONSIDERED. AS A RESULT OF THIS PLANNING, SOME STUDENTS WHO OTHERWISE WOULD NOT HAVE ATTENDED COLLEGE, MIGHT ENROLL FOR A PERIOD OF TIME, LEAVE, AND FIND EMPLOYMENT ROUTES OPEN TO THEM. THIS FACTOR COULD BE AN INCENTIVE TO CONTINUE SCHOOL AND BE QUALIFIED FOR HIGHER LEVEL WORK, MAKING MORE SATISFIED CITIZENS.

AS MORE STUDENTS ENTER JUNIOR COLLEGES, AND DROP OUT OR GRADUATE, MUCH MORE EFFORT MUST BE MADE TO PROVIDE THE INFORMATION NECESSARY FOR THEM TO MAKE REALISTIC DECISIONS ABOUT OCCUPATIONS.

EXHIBIT A

PUBLIC SERVICE OCCUPATIONS PROGRAMS

HUMAN SERVICESPROGRAMRELATED JOBSEDUCATION

TEACHER ASSISTANT

INSTRUCTIONAL AIDE; TEACHER AIDE;
TEACHER ASSISTANT; SPECIAL EDUCATION
AIDE; NURSERY SCHOOL AIDE.

LIBRARY TECHNICIAN

CLERK (INTERMEDIATE, SENIOR);
LIBRARY TECHNICAL ASSISTANT

INSTRUCTIONAL MEDIA

SPECIALIST

IN SCHOOLS, PRIVATE INDUSTRY, AND
THE ARMED SERVICES

SOCIAL

SOCIAL SERVICES

GROUP COUNSELOR; COUNSELOR ASSISTANT;
SOCIAL SERVICE ASSISTANT I - II;
COMMUNITY SERVICE AIDE; CORRECTIONAL
PROGRAM ASSISTANT; ELIGIBILITY WORKER;
INSTITUTIONAL GROUP WORKER, EMPLOYMENT
COMMUNITY WORKER.

MUNICIPAL SERVICES

<u>PROGRAM</u>	<u>RELATED JOBS</u>
<u>URBAN DEVELOPMENT</u>	
COMMUNITY PLANNING AND REDEVELOPMENT:	CITY PLANNING TECHNICIAN
<u>PUBLIC TRANSPORTATION SYSTEM</u>	
TRAVEL SERVICES:	
STEWARDESS AND	WITH ALL TRAVEL AGENCIES (AIRLINE,
STEWARD	BUS, SHIP)
PROFESSIONAL TRAVEL	TRAVEL AGENT (PRIVATE BUSINESS OR
GUIDE	TRAVEL AGENT)
AIRPORT OPERATION	ASSISTANT AIRPORT MANAGER, BUSINESS MANAGER, OPERATIONS ASSISTANT
<u>ADMINISTRATIVE SERVICES</u>	
PUBLIC SERVICE	SUPERVISORY AND STAFF POSITIONS IN
MANAGEMENT	FEDERAL AND STATE, COUNTY OR CITY GOVERNMENTAL AGENCIES.
<u>PARK AND RECREATION</u>	
RECREATION TECHNICIAN	FIELD OR GROUP RECREATION WORKER; CAMP COUNSELOR; CORRECTIONAL PROGRAM ASSISTANT
<u>OTHER SERVICES</u>	
COMMUNICATION TECHNICIAN	BROADCAST (TV) PROGRAMMER; RADIO AND TV ANNOUNCER/DISPATCHER

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EXHIBIT B

NAME OF PROGRAM ACCOUNTING

<u>FIRST SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
ACCOUNTING 1A-B Principles of Accounting	4	Income Tax Preparation (assistant I) Bank Teller
BUSINESS 1 Introduction to Business	3	
English 1A	3	
Psychology 1A	3	
Mathematics 160 or Business 50	3	
Physical Education	$\frac{1}{2}$	
	<u>16$\frac{1}{2}$</u>	
<u>SECOND SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
ACCOUNTING 2A-B Principles of Accounting	4	Income Tax Preparation (assistant II) Accounting Clerk (service industry) Cashier
SECRETARIAL SCIENCE 1 or 50 Beginning Typewriting	3-1	
Business Information Systems 1	3	
English of Speech or Business 77	3	
Business 72 A-B-c	3	
Physical Education	$\frac{1}{2}$	
	<u>16$\frac{1}{2}$</u>	
<u>THIRD SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
ACCOUNTING 61 Cost Accounting	3	Accounting Clerk (manufacturing industry)
BUSINESS 11 Business Law	3	
Accounting 62	3	
Secretarial Science 2	3	
Health Education 2	2	
Physical Education	$\frac{1}{2}$	
	<u>14$\frac{1}{2}$</u>	
<u>FOURTH SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
ACCOUNTING 52 Payroll and Income Tax Accounting	3	Accounting Clerk (manufacturing industry, including payroll) Income Tax Preparation
Secretarial Science 81 A-B-C-D	1-4	
Secretarial Science 74	3	
American Studies 1	4	
Economics 5	3	
Physical Education	$\frac{1}{2}$	
	<u>14$\frac{1}{2}$-17$\frac{1}{2}$</u>	

TRANSFER TO FOUR-YEAR INSTITUTIONS

Students must meet General Education requirements and additional major requirements.

All California State Colleges have an accounting option within their Business Administration programs.

NAME OF PROGRAM AGRONOMY

<u>FIRST SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
AGRICULTURE 2- Agriculture Measurement	2	Farm hand
AGRICULTURE 64- Tractor Skills	2	Tractor operator
AGRICULTURE 28- Field Crop Production	3	Irrigator
AGRICULTURE 61- Agriculture Conference	1	
Psychology 1A	3	
English 1A	3	
Physical Education	$\frac{1}{2}$	
	<u>14 $\frac{1}{2}$</u>	
<u>SECOND SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
AGRICULTURE 23- Forage Crops	3	Plant pathologist Aide
AGRICULTURE 29- Farm Management	3	Assistant Fieldman (food processing)
AGRICULTURE 62- Agriculture Conference	1	Plant inspection Aide
		Back hoe operation
Agriculture 24	3	Assistant buyers for food chains
English or Speech	3	(wholesale and retail)
Electives	3	Salesman trainee
Physical Education	$\frac{1}{2}$	(fertilizer, feed, spray and insecticide)
	<u>16 $\frac{1}{2}$</u>	
<u>THIRD SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
AGRICULTURE 43 and 43L- Nursery Management, Practices and Management Laboratory	4	Foreman or the above areas plus more responsibility and promotion
AGRICULTURE 27- Vegetable Production	3	
AGRICULTURE 32- Agricultural Engineering Power	3	Sales (fertilizer, feed, spray, insecticide)
American Studies 1	4	
Electives	2	
Physical Education	$\frac{1}{2}$	
	<u>16 $\frac{1}{2}$</u>	
<u>FOURTH SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
AGRICULTURE 31B- Farm Mechanics	2	Farm Mechanic
AGRICULTURE 33- Agricultural Engineering Equipment	3	Diesel Mechanic
		Farm equipment Mechanic
		Fieldman (fertilizer, seed, insecticide)
Health Education 1	2	
Business Education	3	Agricultural Commissioner trainee
Electives	4	(County) weights, measurements, insecticide, rodents
Physical Education	$\frac{1}{2}$	Agricultural Extension service trainee
	<u>14 $\frac{1}{2}$</u>	Civil, State and Local (various jobs)

TRANSFER TO FOUR-YEAR INSTITUTIONS

Students must meet General Education requirements and additional major requirements.

California State Colleges - San Luis Obispo, Pomona, Fresno, Chico

University of California - Davis, Riverside (electives only)

Utah State

Oregon State

Arizona State, Tempe

Humboldt State

NAME OF PROGRAM AEROSPACE DRAFTING TECHNOLOGY

<u>FIRST SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
DRAFTING 31 - Basic Drafting Practices	4	Draftsman trainee - (part time) some skills in specific tasks: making changes, tracing, lettering, small detail drawing.
Mathematics 040	3	
Psychology 1A	3	
English 1A	3	
Elective	2	
Physical Education	<u>1/2</u>	
	15 1/2	
<u>SECOND SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
DRAFTING 32 - Introduction to Drafting Specialties	4	Beginning Draftsman - More responsible tasks: making small working drawings from engineering sketches, simple pictorial drawings, free hand sketches involving math skills.
INDUSTRIAL ARTS 33 - Machine Shop Practices	3	
Mathematics 045	3	
English 2	3	
Health Education 1	2	
Physical Education	<u>1/2</u>	
	15 1/2	
<u>THIRD SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
AEROSPACE DRAFTING 33 - Aerospace Drafting	5	Beginning Draftsman - makes drawings in some specialties: castings, forgings, sheetmetal parts, weldments, some tool and machine design. More responsibility and knowledge of metallurgy.
METAL TRADES 61 - Elementary Metallurgy	4	
American Studies 1	4	
Elective	2	
Physical Education	<u>1/2</u>	
	15 1/2	
<u>FOURTH SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
AEROSPACE DRAFTING 34 - Aerospace Drafting	5	Junior grade draftsman with design skills. Makes medium to large assembly drawings. Progress to higher levels in a minimum of time.
METAL TRADES 62 - Manufacturing Processes	4	
Elective	2	
Work Experience	3	
Physical Education	<u>1/2</u>	
	14 1/2	

TRANSFER TO FOUR-YEAR INSTITUTIONS

Students must meet General Education requirements and additional major requirements.
 California State College - Long Beach (Industrial Technology)
 California State College - San Luis Obispo (Engineering Design)

NAME OF PROGRAM AGRI-BUSINESS

FIRST SEMESTER

UNITS

EMPLOYMENT POSSIBILITIES

AGRICULTURE 2- Agriculture Measurement
 AGRICULTURE 61- Agriculture Conference
 AGRICULTURE electives
 BUSINESS 1- Introduction to Business

2
 1
 3
 3

Sales Assistant at nursery
 Surveyor's Aide
 Assistant institutional gardener

Secretarial Science 1 or 50
 Psychology 1A
 Physical Education

3-1
 3
 $\frac{1}{2}$

15 $\frac{1}{2}$ -13 $\frac{1}{2}$

SECOND SEMESTER

UNITS

EMPLOYMENT POSSIBILITIES

AGRICULTURE 62- Agriculture Conference
 AGRICULTURE electives
 BUSINESS 11-Business Law

2
 6
 3

Salesman trainee
 (fertilizer, feed, spray and
 insecticide)

English 1A or 2
 Physical Education

3
 $\frac{1}{2}$

Sales, Nursery
 Landscape Gardener (trainee)
 Plant sprayer
 Mosquito abatement
 Plant pathologist Aide

14 $\frac{1}{2}$

THIRD SEMESTER

UNITS

EMPLOYMENT POSSIBILITIES

AGRICULTURE electives
 BUSINESS 21- Salesmanship
 AMERICAN STUDIES 1-Instructions

4
 3
 4

Sales (fertilizer, feed, spray,
 insecticide)
 Landscape Gardener
 Sales and Service farm and
 industrial machinery
 Sales and Service (drive in dairy)

English or Speech
 Agriculture 81A-D
 Physical Education

3
 1-4
 $\frac{1}{2}$

15 $\frac{1}{2}$ -18 $\frac{1}{2}$

FOURTH SEMESTER

UNITS

EMPLOYMENT POSSIBILITIES

AGRICULTURE electives
 BUSINESS 22- Marketing and Distribution

6

Sales and Service
 (implement, nursery, chemicals,
 equipment)

Health Education 1
 Agriculture 82A-D
 Electives
 Physical Education

2
 1-4
 3
 $\frac{1}{2}$

Civil Service
 State (various jobs)
 Local

15 $\frac{1}{2}$ -18 $\frac{1}{2}$

TRANSFER TO FOUR-YEAR INSTITUTIONS

Students must meet General Education requirements and additional major requirements.
 California State Colleges- San Luis Obispo, Pomona, Fresno, Chico
 University of California - Davis, Riverside (electives only)
 Utah State Oregon State Arizona State, Tempe

NAME OF PROGRAM AIR TRANSPORTATION-COMMERCIAL PILOT

<u>FIRST SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
AERO 50- Aviation Ground School	3	None until he gets commercial license
AIR TRANSPORTATION 51A- Basic Transportation	3	
AIR TRANSPORTATION 41- Basic Flight	1	
English 1A	3	
Psychology 1A	3	
Electives	3	
Physical Education	$\frac{1}{2}$	
	<u>16 $\frac{1}{2}$</u>	
<u>SECOND SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
AIR TRANSPORTATION 42- Intermediate Flight	1	With license: executive flying, corporate pilot, charter pilot, aerial photography, air freight, agricultural application, crop and game surveying, pipe and power line patrol, and flight instruction.
AERO 52- Aviation - Navigation	3	
American Studies 1	4	
English or Speech	3	
Electives	2	
Physical Education	$\frac{1}{2}$	
	<u>13 $\frac{1}{2}$</u>	
<u>THIRD SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
AIR TRANSPORTATION 43- Intermediate Flight	1	With commercial license: executive flying, corporate pilot, charter pilot, aerial photography, air freight, agricultural application, crop and game surveying, pipe and power line patrol, and flight instruction.
AERO 53- Aviation-Meteorology	3	
Business Information Systems 1	3	
Geography 2	3	
Accounting 51	3	
Electives	3	
Physical Education	$\frac{1}{2}$	
	<u>16 $\frac{1}{2}$</u>	
<u>FOURTH SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
AIR TRANSPORTATION 44- Intermediate Flight	1	With commercial license: executive flying, corporate pilot, charter pilot, aerial photography, air freight, agricultural application, crop and game surveying, pipe and power line patrol, and flight instruction.
AERO 51- Aviation Ground School- Advanced	3	
Secretarial Science 1 or 50	3-1	
Physical Science 100, 110	4	
Electives	6	
Physical Education	$\frac{1}{2}$	
	<u>17 $\frac{1}{2}$</u>	

TRANSFER TO FOUR-YEAR INSTITUTIONS

Students must meet General Education requirements and additional major requirements.

California State College - San Jose (Aeronautical Maintenance & Aeronautical Operations)		
Arizona State	University of Illinois	Ohio State University
Utah State - Parsons (Iowa)	University of Purdue	St. Louis University
Emery-Riddle (Florida)		

NAME OF PROGRAM AIR TRANSPORTATION-GENERAL

<u>FIRST SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
AIR TRANSPORTATION 51A- Basic Transportation	3	Clerical Trainee: Reservations Sales (Front counter) Baggage handler Dispatch clerk
English 1A	3	
Psychology 1A	3	
Electives	6	
Physical Education	$\frac{1}{2}$	
	<u>15 $\frac{1}{2}$</u>	
<u>SECOND SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
AIR TRANSPORTATION 51B- Passenger Relations	3	Clerical Trainee: Reservations Sales (Front counter) Baggage handler Dispatch clerk Shift supervisor with six (6) months experience.
American Studies 1	4	
English or Speech	3	
Health Education 1	2	
Electives	3	
Physical Education	$\frac{1}{2}$	
	<u>15 $\frac{1}{2}$</u>	
<u>THIRD SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
AIR TRANSPORTATION 52A- Air Regulations and Related Agencies	3	Higher level of pay, More responsibilities within the four (4) areas above
BUSINESS INFORMATION SYSTEMS 1- Introduction to Business Information	3	
Geography 2	3	
Accounting 51	3	
Electives	3	
Physical Education	$\frac{1}{2}$	
	<u>15 $\frac{1}{2}$</u>	
<u>FOURTH SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
AIR TRANSPORTATION 52B- Airline Management	3	Higher level of pay, More responsibilities within the four (4) areas above
SECRETARIAL SCIENCE 1 or 50- Beginning Typewriting or Typewriting Review	3-1	
Physical Science 100; 110	4	
Electives	6	
Physical Education	$\frac{1}{2}$	
	<u>16 $\frac{1}{2}$</u>	

TRANSFER TO FOUR-YEAR INSTITUTIONS

Students must meet General Education requirements and additional major requirements.

California State College - San Jose (Aeronautical Maintenance & Aeronautical Operations)

Arizona State

University of Illinois

Ohio State University

Utah State - Parsons (Iowa)

University of Purdue

St. Louis University

Emery-Riddle (Florida)

NAME OF PROGRAM ARCHITECTURAL TECHNOLOGY

<u>FIRST SEMESTER</u>		<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
ARCHITECTURAL TECHNOLOGY 21A-	Architectural Drafting	4	Office boy
ARCHITECTURAL TECHNOLOGY 22A-	Introduction to Architecture	2	
ARCHITECTURAL TECHNOLOGY 24-	Materials and Principles of Construction	2	
English 1A		3	14½
Psychology 1A		3	
Physical Education		½	
<u>SECOND SEMESTER</u>		<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
ARCHITECTURAL TECHNOLOGY 21B-	Architectural Drafting	4	Draftsman (simple chores) Renderer
ARCHITECTURAL TECHNOLOGY 22B-	Introduction to Architecture	2	
English or Speech		3	
Mathematics 040		3	
Elective		3	
Physical Education		½	
		15½	
<u>THIRD SEMESTER</u>		<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
ARCHITECTURAL TECHNOLOGY 23A-	Architectural Rendering	2	Draftsman
ARCHITECTURAL TECHNOLOGY 31A-	Architectural Drafting	4	
Architectural Technology 81-		3	
American Studies 1		4	
Elective		3	
Physical Education		½	
		16½	
<u>FOURTH SEMESTER</u>		<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
ARCHITECTURAL TECHNOLOGY 31B-	Architectural Drafting	4	Draftsman
ARCHITECTURAL TECHNOLOGY 23B-	Architectural Rendering	3	
Architectural Technology 82-		3	
Health Education 1		2	
Electives		3	
Physical Education		½	
		15½	

TRANSFER TO FOUR-YEAR INSTITUTIONS

Students must meet General Education requirements and additional major requirements.

California State College - San Luis Obispo

California State College - Pomona

Arizona State College - Tempe

NAME OF PROGRAM CIVIL TECHNOLOGY

<u>FIRST SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
CIVIL TECHNOLOGY 55A-Surveying and Measurements	3	Engineering Aide I (Government) Draftsman Surveying party (Rodman, chain man) Testing (soil) Calculating
CIVIL TECHNOLOGY 51- Materials Testing	3	
CIVIL TECHNOLOGY 52- Civil Drafting	2	
MATHEMATICS 045 or 010, 020- Intermediate Technical Mathematics, Elementary Algebra, Plane Geometry	3	
Psychology 1A	3	
English or Speech	3	<u>17½</u>
Physical Education	<u>½</u>	
<u>SECOND SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
CIVIL TECHNOLOGY 54- Statics and Dynamics	4	Engineering Aide II (upon passing examination) County roads of flood control, city or construction firms More responsibilities in above jobs
CIVIL TECHNOLOGY 55B- Surveying and Measurements	3	
GEOLOGY 2- General Geology, Physical	3	
Mathematics 140	3	
English or Speech	3	
Physical Education	<u>½</u>	<u>16½</u>
	<u>16½</u>	

<u>THIRD SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
CIVIL TECHNOLOGY ELECTIVE- Industrial Arts or Engineering	3	
Mathematics 145	3	
Physics 47	4	
American Studies 1	4	
Physical Education	<u>½</u>	
	<u>14½</u>	

<u>FOURTH SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
CIVIL TECHNOLOGY ELECTIVE- Industrial Arts or Engineering	3	Engineering Aide II (state & county) Highways, Bridges, Water, Forestry, Conservation, Reclamation (Federal) Civil Technician
Physics 48	4	
Health Education 1	2	
Civil Technology 81AD	1-4	
Electives	3	
Physical Education	<u>½</u>	<u>13-16½</u>
	<u>13-16½</u>	

TRANSFER TO FOUR-YEAR INSTITUTIONS

Students must meet General Education requirements and additional major requirements.
California State College - Long Beach (Industrial Technology) (Construction)
California State College - Fresno Civil Technology (Photogrammetry surveying and mapping)
Northern Arizona (Flagstaff) Civil Technology.

NAME OF PROGRAM ENVIRONMENTAL SCIENCE TECHNOLOGY

<u>FIRST SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
ENVIRONMENTAL SCIENCE 100- Environmental Inventory	3	At the present time, job titles are being developed. With the Environmental Sciences, however most technical jobs require the completion of two years.
BIOLOGY 100- Biology	3	
MARINE SCIENCE 100- The Marine Sciences	3	
Mathematics 040	3	
Psychology 1A	3	
Physical Education	$\frac{1}{2}$	
	<u>15 $\frac{1}{2}$</u>	

<u>SECOND SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
ENVIRONMENTAL SCIENCE 110- Resources and Man	3	
ENVIRONMENTAL SCIENCE 120- Conservation and Management of Aquatic Resources	3	
ENGLISH 2- Technical Report Writing	3	
American Studies 1	4	
Mathematics 045	3	
Physical Education	$\frac{1}{2}$	
	<u>16 $\frac{1}{2}$</u>	

<u>THIRD SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
ELECTRONIC TECHNOLOGY 70- Electronic Construction Techniques	2	
INDUSTRIAL ARTS 34- Electronics	3	
BUSINESS INFORMATION SYSTEMS 6- Computer Programming Techniques	4	
Environmental Science 140	4	
English or Speech	3	
Physical Education	$\frac{1}{2}$	
	<u>16 $\frac{1}{2}$</u>	

<u>FOURTH SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
ENVIRONMENTAL SCIENCE 130- Soils	3	Air pollution technician Water quality technician Sewage plant technician Soil quality technician
ENVIRONMENTAL SCIENCE 210- Oceanographic Techniques	3	
ENVIRONMENTAL SCIENCE 220- Agricultural Chemicals	2	
Biology 110	1	
Biology 111	1	
Electives	6	
Physical Education	$\frac{1}{2}$	
	<u>16 $\frac{1}{2}$</u>	

TRANSFER TO FOUR-YEAR INSTITUTIONS

Students must meet General Education requirements and additional major requirements. There are no programs in the colleges that are directly applicable to Environmental Science as yet. California State College - Humboldt does have several programs that are closely related.

NAME OF PROGRAM MARINE LABORATORY TECHNICIAN OPTION

<u>FIRST SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
MARINE SCIENCE 100- The Marine Sciences	3	At the present time job titles are being developed within, the Marine Sciences, however most technical jobs require the completion of two years.
MATHEMATICS 040 (or 010,020)- Elementary Technical Mathematics	3	
INDUSTRIAL ARTS 34- Electronics	3	
ELECTRONICS TECHNOLOGY 70- Electronic Construction Techniques	2	
English 1A	3	
Psychology 1A	3	
Physical Education 27A-D (Lifesaving)	$17\frac{1}{2}$	

<u>SECOND SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
MARINE SCIENCE 110- Ocean Resources	3	
ENVIRONMENTAL SCIENCE 100- Environmental Inventory	3	
MATHEMATICS 045 (or 110,120)- Intermediate Technical Mathematics	3	
INDUSTRIAL ARTS 32- Drafting	2	
American Studies 1	4	
Physical Education 29 A-D (Skin diving)	$15\frac{1}{2}$	

<u>THIRD SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
MARINE SCIENCE 200- Marine Biology	3	
ENVIRONMENTAL SCIENCE 140- Chemistry for Technicians	4	
PHYSICS 47-(or 2A)- Technical Physics	4	
ENGLISH 2- Technical Report Writing	3	
Physical Education 30A-D (Scuba Diving)	2	
	16	

<u>FOURTH SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
Physical Science Option: Biology Science Option:		Marine technician
		Marine laboratory technician
		Marine electronics technician
MARINE SCIENCE 210	4	
PHYSICS 48 (or 2B)	4	
COMPUTER SCIENCE 100	1	
INDUSTRIAL ARTS 33	3	
Geology 2	3	
Health Education 1	2	
Physical Education	$17\frac{1}{2}$	
	$15\frac{1}{2}-17\frac{1}{2}$	

TRANSFER TO FOUR-YEAR INSTITUTIONS

Students must meet General Education requirements and additional major requirements. Transfer difficult unless student has substituted "theoretical" for "technical" chemistry, math and physics courses. Marine Science courses not transferrable except MS 100 and 200 which will transfer to California State College - Fullerton (at junior level).

NAME OF PROGRAM JOURNALISM

<u>FIRST SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
JOURNALISM 20A- Newswriting and Reporting	3	Copy Messenger (part-time)
PHOTOGRAPHY 20- Basic Photography	2	
Secretarial Science 1 or 50	3-1	
English 1A	3	
Psychology 1A	3	
Health Education 1	2	
Physical Education	$\frac{1}{2}$	
	<u>16 $\frac{1}{2}$</u>	

<u>SECOND SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
JOURNALISM 20B- Advanced Newswriting and Reporting	3	Editorial Department Assistant (part-time)
Business Management and Retailing	3	
English or Speech	3	
Physical Science 100, 110	4	
Elective	3	
Physical Education	$\frac{1}{2}$	
	<u>16 $\frac{1}{2}$</u>	

<u>THIRD SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
JOURNALISM 21A- Copyreading	3	
JOURNALISM 22A- Publication Writing	2	
English 2	3	
American Studies 1	4	
Biology 2	4	
Physical Education	$\frac{1}{2}$	
	<u>16 $\frac{1}{2}$</u>	

<u>FOURTH SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
JOURNALISM 21B- Makeup and Editing	3	Reporter
JOURNALISM 22B- Publication Writing	2	Copy Writing (public relations work)
English 16	$\frac{1}{2}$	Copy reader
History 4A or 4B	3	(must get B.A. or extensive experience before further advancement)
Elective	6	
Physical Education	$\frac{1}{2}$	
	<u>15</u>	

TRANSFER TO FOUR-YEAR INSTITUTIONS

Students must meet General Education requirements and additional major requirements.

The following institutions are accredited by the Association for Education in Journalism:

University of Southern California

Journalism Majors are available at:

California State College - San Fernando Valley

California State College - Long Beach

California State College - San Jose

California State College - Fullerton (Communications)

NAME OF PROGRAM INDUSTRIAL DRAFTING

<u>FIRST SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
DRAFTING 31- Basic Drafting Practices	4	Draftsman trainee- (part time) some skills in specific tasks: making changes, training, lettering, small detail drawing.
Mathematics 040	3	
Psychology 1A	3	
English 1A	3	
Elective	2	
Physical Education	$\frac{1}{2}$	
	<u>15 $\frac{1}{2}$</u>	
<u>SECOND SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
INDUSTRIAL DRAFTING 32- Introduction to Drafting Specialties	4	Beginning Draftsman- More responsible tasks: making small working drawing from engineering sketches, simple pictorial drawings, free hand sketches involving math skills.
INDUSTRIAL ARTS 33- Machine Shop Practices	3	
Mathematics 045-	3	
English 2	3	
Health Education 1	2	
Physical Education	$\frac{1}{2}$	
	<u>15 $\frac{1}{2}$</u>	
<u>THIRD SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
INDUSTRIAL DRAFTING 33- Mechanical Design	5	Beginning Draftsman- makes drawings in some specialties- aerospace, tool design, machine design, structures. More responsibility and knowledge of metallurgy.
METAL TRADES 61- Elementary Metallurgy	4	
American Studies 1	4	
Elective	2	
Physical Education	$\frac{1}{2}$	
	<u>15 $\frac{1}{2}$</u>	
<u>FOURTH SEMESTER</u>	<u>UNITS</u>	<u>EMPLOYMENT POSSIBILITIES</u>
INDUSTRIAL DRAFTING 34- Mechanical Design Technology	5	Junior grade draftsman with some design skills. Makes medium to large assembly drawings in the above specialty areas. Progress to higher levels in a minimum of time.
METAL TRADES 62- Manufacturing Processes	4	
Elective	2	
Physical Education	$\frac{1}{2}$	
Work Experience (optional)	3	
	<u>14 $\frac{1}{2}$</u>	

TRANSFER TO FOUR-YEAR INSTITUTIONS

Students must meet General Education requirements and additional major requirements.
California State College - Long Beach (Industrial technology)
California State College - San Luis Obispo (Engineering design)

NOTES

1. ROBERT M. HUTCHINS, THE UNIVERSITY OF UTOPIA (CHICAGO, ILLINOIS: THE UNIVERSITY OF CHICAGO PRESS, 1953) P. 3.
2. B. LAMAR JOHNSON, ISLANDS OF INNOVATION EXPANDING: CHANGES IN THE COMMUNITY COLLEGE (BEVERLY HILLS, CALIFORNIA: GLENCOE PRESS, 1953) P. 38.
3. IBID., P. 39.
4. U.S. ADVANCED STATISTICS FOR OPENING FALL ENROLLMENT: 1969 (WASHINGTON, D.C.: U.S. GOVERNMENT PRINTING OFFICE, U.S. OFFICE OF EDUCATION, 1969).
5. RICHARD HASTROP, ORIENTATION TO THE TWO YEAR COLLEGE (HOMewood, ILLINOIS: LEARNING SYSTEMS COMPANY, 1970) P. 96.
6. BOARDS OF TRUSTEES OF NORTH ORANGE COUNTY AND ORANGE COAST COLLEGE DISTRICTS, "OCCUPATIONAL CURRICULAR NEEDS," 1966 (P. 91).
7. IBID., P. 81.
8. LESLIE R. WHITE, NEW CAREERS IN LOCAL GOVERNMENT (BERKELEY, CALIFORNIA: INSTITUTE FOR LOCAL SELF-GOVERNMENT, 1969).
9. SOME WHO DARED: COMMUNITY COLLEGE INVOLVEMENT WITH PUBLIC SERVICE ASPECTS OF THE URBAN PROBLEM IN CALIFORNIA (BERKELEY, CALIFORNIA: THE INSTITUTE FOR LOCAL SELF-GOVERNMENT, 1969) PP. 13-14.
10. SAN MATEO COMMUNITY COLLEGE DISTRICT, "VOCATIONAL-TECHNICAL EDUCATION FOR THE 1970's" (SAN MATEO: 1969-70) P. 65.
11. NORMAN C. HARRIS, "THE COMMUNITY COLLEGE AND MIDDLE MANPOWER," IN TECHNICAL VOCATIONAL EDUCATION AND THE COMMUNITY COLLEGE. PROCEEDINGS OF THE THIRTEENTH ANNUAL LEGISLATIVE WORK CONFERENCE OF THE SOUTHERN REGIONAL EDUCATION BOARD. (ATLANTA: SOUTHERN REGIONAL EDUCATION BOARD, 1964) P. 23.
12. DR. JOHN COLLINS, PRESIDENT OF MOORPARK JUNIOR COLLEGE, MOORPARK, CALIFORNIA IN A LECTURE AT UCLA, MAY 8, 1971.
- 12-A. JOHN SUMMERSKILL, "DROPOUTS FROM COLLEGE" IN THE AMERICAN COLLEGE, NEVITT SANFORD (ED.) (NEW YORK: HARPER AND BROTHERS, 1957) P. 631.
13. ERIK H. ERIKSON, CHILDHOOD AND SOCIETY (NEW YORK: W.W. NORTON, 1950) P. 132.
14. MAX F. BAER AND EDWARD C. ROEBER, OCCUPATIONAL INFORMATION (CHICAGO: SCIENCE RESEARCH ASSOCIATES, 1964) P. 441.
15. RONALD REAGAN, GOVERNOR OF CALIFORNIA, IN LOS ANGELES TIMES, FEBRUARY 12, 1971.
16. CALIFORNIA EDUCATION CODE, SECTIONS 6401 AND 25503.5 (VEYSEY ACT), AMENDMENTS OF 1963 AND 1967.

17. S.A. FINE AND C.A. HEINZ, "THE FUNCTIONAL OCCUPATIONAL CLASSIFICATION STRUCTURE," PERSONNEL & GUIDANCE JOURNAL, VOL. 37, NO. 2 (OCTOBER, 1958) PP. 180-92.
18. WHITE, OP.CIT.
19. COAST COMMUNITY COLLEGE BOARD OF TRUSTEES (MINUTES OF REGULAR MEETING, APRIL 21, 1971).
20. ORANGE COAST COLLEGE CATALOG, 1971-72, COSTA MESA, CALIFORNIA (TO BE PUBLISHED MAY, 1971).
21. IBID.

BIBLIOGRAPHY

1. BAER, MAX F. AND ROEBER, EDWARD C., OCCUPATIONAL INFORMATION, CHICAGO: SCIENCE RESEARCH ASSOCIATES, 1962.
2. BEARDSLEE, DAVID, AND O'DOWD, DONALD, "STUDENTS AND THE OCCUPATIONAL WORLD," IN THE AMERICAN COLLEGE, NEVITT SANFORD (ED.), NEW YORK: JOHN WILEY AND SONS, 1962.
3. BOARDS OF TRUSTEES OF NORTH ORANGE COUNTY AND ORANGE COAST COLLEGE DISTRICTS, "OCCUPATIONAL CURRICULAR NEEDS," 1966.
4. CALIFORNIA EDUCATION CODE, SECTION 6401 AND SECTION 25503.5 (VEYSEY ACT), AMENDMENTS OF 1963 AND 1967.
5. ERIKSON, ERIK H., CHILDHOOD AND SOCIETY, NEW YORK: W.W. NORTON, 1950.
6. HARRIS, NORMAN C., "THE COMMUNITY COLLEGE AND MIDDLE MANPOWER," IN TECHNICAL-VOCATIONAL EDUCATION AND THE COMMUNITY COLLEGE, PROCEEDINGS OF THE THIRTEENTH ANNUAL LEGISLATURE WORK CONFERENCE OF THE SOUTHERN REGIONAL EDUCATION BOARD. ATLANTA: SOUTHERN REGIONAL EDUCATION BOARD, 1964.
7. HASTROP, RICHARD, ORIENTATION TO THE TWO YEAR COLLEGE, HOMewood, ILLINOIS: LEARNING SYSTEMS COMPANY, 1970.
8. HUTCHINS, ROBERT M., THE UNIVERSITY OF UTOPIA, CHICAGO: THE UNIVERSITY OF CHICAGO PRESS, 1953.
9. JOHNSON, B. LAMAR, ISLANDS OF INNOVATION EXPANDING: CHANGES IN THE COMMUNITY COLLEGE, BEVERLY HILLS, CALIFORNIA: GLENCOE PRESS, 1969.
10. ROE, ANNE, THE PSYCHOLOGY OF OCCUPATIONS, NEW YORK: WILEY AND SONS, 1956.
11. ROTH, ROBERT (ED.), THE PSYCHOLOGY OF VOCATIONAL DEVELOPMENT, BOSTON: ALLYN AND BACON, 1970.
12. SAN MATEO COMMUNITY COLLEGE DISTRICT, "VOCATIONAL-TECHNICAL EDUCATION FOR THE 1970's," SAN MATEO: 1969-70.
13. SOME WHO DARED: COMMUNITY COLLEGE INVOLVEMENT WITH PUBLIC SERVICE ASPECTS OF THE URBAN PROBLEM IN CALIFORNIA, BERKELEY, CALIFORNIA: THE INSTITUTE FOR LOCAL SELF-GOVERNMENT, 1969.
14. SUMMERSKILL, JOHN, "DROPOUTS FROM COLLEGE," IN THE AMERICAN COLLEGE, NEVITT SANFORD (ED.), NEW YORK: JOHN WILEY AND SONS, 1962.
15. SUPER, DONALD E., THE PSYCHOLOGY OF CAREERS, NEW YORK: HARPER AND BROTHERS, 1957.

16. U.S. ADVANCED STATISTICS FOR OPENING FALL ENROLLMENT, BASIC INFORMATION,
1969, WASHINGTON, D.C.: U.S. GOVERNMENT PRINTING OFFICE, U.S. OFFICE
OF EDUCATION, 1969.
17. WHITE, LESLIE R., NEW CAREERS IN LOCAL GOVERNMENT, BERKELEY, CALIFORNIA:
INSTITUTE FOR LOCAL SELF-GOVERNMENT, 1969.